

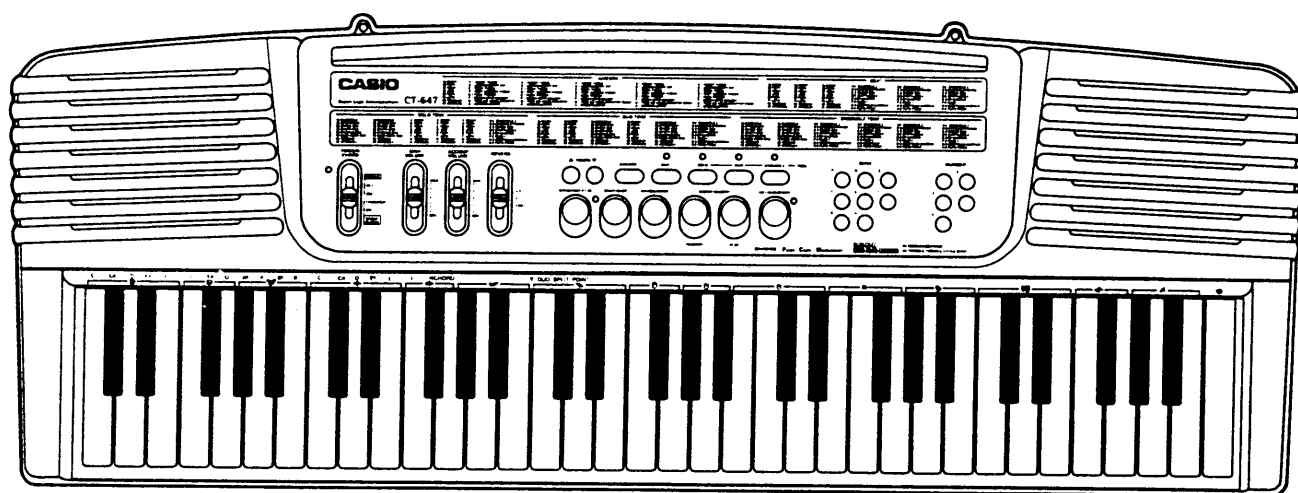
CT-647

ELECTRONIC MUSICAL INSTRUMENT
INSTRUMENTO MUSICAL ELECTRONICO

OPERATION MANUAL..... 2

MANUAL DE OPERACION.... 30

SPARE PARTS MASTER



CASIO®

CT-647

ELECTRONIC MUSICAL INSTRUMENT

Main Features

Jukebox Function

Your own private "jukebox" pre-programmed with 40 tunes, ranging from established favorites to CASIO originals. Playback tunes and see how it uses the various accompaniments, fill-ins and endings available with the CT-647. Then see if you can play the same tunes yourself!

Ad-Lib Musician Function

Play polished ad-libs with the greatest of ease! This innovative function adjusts the keyboard so that any key you play matches the accompaniment pattern. You can use the Ad-Lib function to play along with the Auto-Accompaniment or the playback using the Jukebox function.

120 built-in tones

Outstandingly realistic tones from basic piano to just about any other sound imaginable. Play tones alone in the Solo mode, or mix and match them with the Duo mode (keyboard split between two tones) and Ensemble mode (two tones mixed).

Reverb effects

Take your pick between two different reverbs.

Stereo pan

Stereo pan effects are built into each tone and rhythm to add more dynamism to the sound output from the speakers and headphones.

40 rhythms

All the rhythm you could ever need, from pops and heavy metal to classic.

Expert Logic Accompaniment System

A totally revolutionary new intelligent accompaniment system that automatically selects and plays the accompaniment pattern that matches the key of the chord progression being played. The result is sophisticated accompaniment patterns that are musically logical all the time.

Precaution

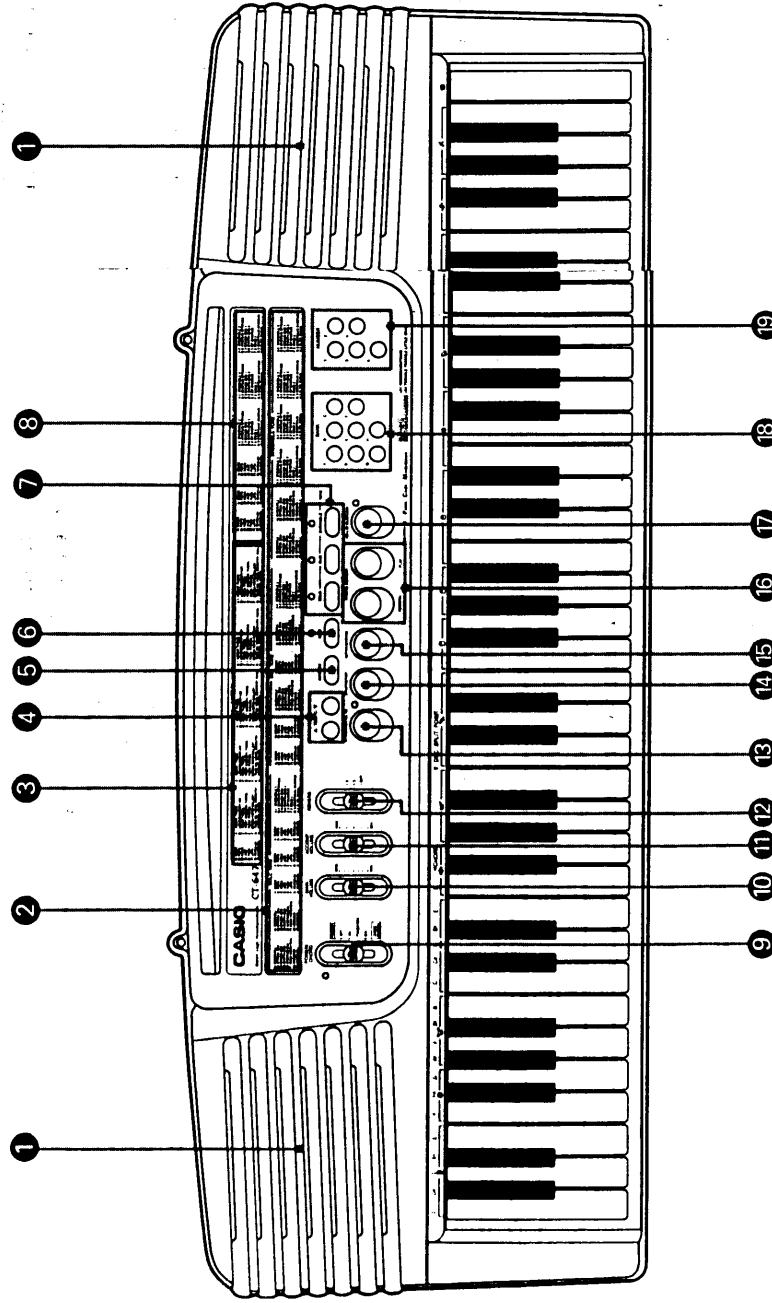
If battery power drops below a certain level, the power lamp loses its brightness, the quality of the tone produced deteriorates, sounds cut off suddenly and unexpectedly during keyboard play, a totally different tone may sound, Chord Memory contents may be lost, auto-rhythm pattern or Jukebox playback may become abnormal. Should any of these symptoms occur, replace batteries as soon as possible.

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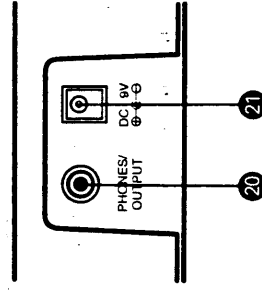
1. General Guide

1. General Guid



- ① Speakers
- ② TONE list
- ③ JUKEBOX tunes list
- ④ TEMPO control buttons
- ⑤ JUKEBOX button
- ⑥ BEAT button
- ⑦ TONE buttons (SOLO, DUO, ENSEMBLE)
- ⑧ BEAT list
- ⑨ POWER/CHORD selector
- ⑩ MAIN VOLUME slider
- ⑪ ACCOMP VOLUME slider
- ⑫ REVERB selector
- ⑬ SYNCHRO/FILL-IN button
- ⑭ START/STOP button
- ⑮ INTRO/ENDING button
- ⑯ CHORD MEMORY buttons (RECORD, PLAY)
- ⑰ AD-LIB MUSICIAN button
- ⑱ BANK buttons
- ⑲ NUMBER buttons

[Rear panel]



- ②① PHONES/OUTPUT jack
- ②② AC adaptor jack

2. Choosing a Power Supply

You can power your keyboard with 6 D batteries, standard AC power (with an optional AC adaptor) or by plugging in to the cigarette lighter of a car (with an optional car adaptor).

Installing the batteries

This keyboard can be powered by 6 D size (SUM-1/R20P) manganese dry cell batteries. Make sure that the POWER/CHORD selector is set to the OFF position when installing batteries.

1. Open the battery compartment cover on the bottom of the unit.
 2. Load new batteries taking care that the plus (+) and minus (-) poles are facing in the correct directions.
- Standard battery life is approximately 6 hours.

Any of the following conditions indicates that battery power is low, and that you should replace batteries as soon as possible.

- Dim power supply lamp
- Abnormally low speaker/headphone volume
- Distortion of keyboard output
- Abnormal jukebox playback
- Abnormal sound produced by keyboard play
- BEAT and TONE button indicators staying on when power is switched off
- Sudden and unexpected cut off of sound during keyboard play, with the keyboard set up changing to the default settings that are in effect whenever you switch power on.

Precautions

Incorrectly using batteries can cause them to leak or burst, and may damage your unit. Note the following precautions:

- Be sure that the plus (+) and minus (-) poles are facing in the correct directions.
- Do not mix battery types.
- Do not mix new batteries with old ones.
- Never leave dead batteries in the battery compartment.
- Remove batteries when not using the unit for extended periods.
- Never try to recharge the batteries that are specified for the power supply of this unit.
- Do not expose batteries to direct heat, let them become shorted or try to take them apart.
- (If a battery leaks, clean out the battery compartment of the unit immediately, taking care to avoid letting the battery fluid come into direct contact with your skin.)

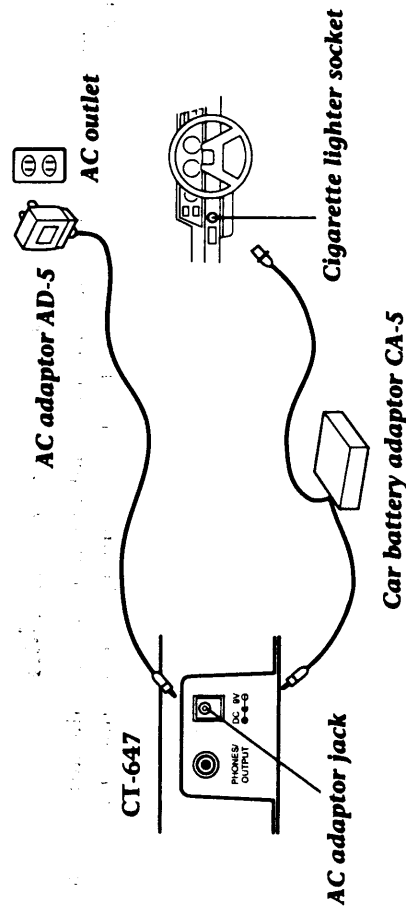
2. Choosing a Power Supply

Using AC power

An AC adaptor (AD-5, optional) is required when using household current. Use only a genuine CASIO adaptor with the same voltage rating (100, 117, 220 or 240V) as the power supply in your area to prevent damage to internal components. Be sure to turn the power of the unit off before you connect the adaptor to the unit. Plug the AC adaptor into the AC outlet and the cord into the unit. This will automatically cut off the battery power supply.

Using a car's cigarette lighter

With the car adaptor (CA-5 optional), DC power is supplied from a car battery through the cigarette lighter. Be sure to turn the power of the unit off before you connect the adaptor to the unit.



IMPORTANT

- The adaptor may become warm when it is being used. This is normal and does not indicate any problem.
- Be sure to unplug the adaptor from the power source when you are not using the unit.
- Whenever connecting or disconnecting the adaptor, be sure that the power of the unit is switched off.
- Be sure to unplug the car adaptor from the cigarette lighter socket when you are not using the unit. Leaving the car adaptor plugged in can cause damage or can run down your car's battery.
- Never connect the car adaptor to a 24V DC cigarette lighter (in a bus or truck). Doing so can damage the unit.
- Certain makers of cars may have non-standard cigarette lighter shapes or sizes. Be sure to check the size of your car's cigarette lighter before using the car adaptor.
- Never use a power supply that does not match that specified for the unit. Doing so can damage the adaptor or your unit.

Auto power off function

Power is automatically cut off approximately 6 minutes after the last operation of the unit. Power supply can be restored by switching power OFF and then ON again.

3. General Operations

Getting started

Follow the steps below to get started.

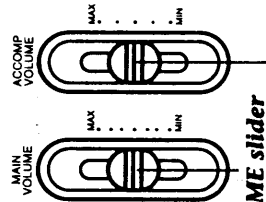
1. Set the POWER/CHORD switch to ON. The power indicator lights.
2. Adjust the volume level using the MAIN volume slider.
3. Select one of the 120 preset tones (see "Preset Tones", page 10).
4. Now, start playing.

Adjusting volume

This keyboard features two volume control sliders.

MAIN VOLUME slider

Adjusts the overall volume of the keyboard.



ACCOMP VOLUME slider

Adjusts the volume of the rhythm and the accompaniment pattern.

MAIN VOLUME slider

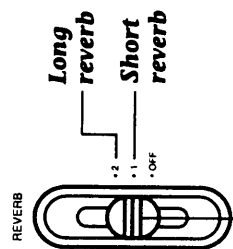
ACCOMP VOLUME slider

IMPORTANT

Always make sure that the ACCOMP VOLUME slider is set at one of the marks along its side. If it is set between two marks, accompaniment and rhythm will not sound.

Reverb effects

Reverb effects make tones longer after they are played, which gives the feeling they are being played in a large hall. This keyboard has two different effects, which you can select between by sliding the REVERB selector between 1 and 2.



REVERB selector

- If you want to play without reverb, slide the REVERB selector to its OFF position.

4. Preset Tones

This keyboard gives you access to a total of 120 preset tones, which are divided into categories that contain 40 tones each: SOLO, DUO, ENSEMBLE.

How to use the Tone List

A Tone List is printed on the panel of the keyboard to show you the BANK and NUMBER inputs required for each tone in the Solo, Duo and Ensemble modes.



SOLO tone list

SOLO tone list

These single tones sound on across the entire keyboard when the indicator above the SOLO button is lit.

DUO tone list

The tone combinations in this list are available when the indicator above the DUO button is lit.

ENSEMBLE tone list

The tones in this list are created by combining two other tones. They sound on across the entire keyboard when the indicator above the ENSEMBLE button is lit.

SOLO Tone List

These tones are classified according to groups, from A through H.

Tone Names (Tone A2=ELEC PIANO)

Group names	Tone Names (Tone A2=ELEC PIANO)
A1 PIANO	A1 PIANO
A2 PIANO	A2 PIANO
A3 PIANO	A3 PIANO
A4 PIANO	A4 PIANO
A5 PIANO	A5 PIANO
A6 PIANO	A6 PIANO
A7 PIANO	A7 PIANO
A8 PIANO	A8 PIANO
A9 PIANO	A9 PIANO
A10 PIANO	A10 PIANO
A11 PIANO	A11 PIANO
A12 PIANO	A12 PIANO
A13 PIANO	A13 PIANO
A14 PIANO	A14 PIANO
A15 PIANO	A15 PIANO
A16 PIANO	A16 PIANO
A17 PIANO	A17 PIANO
A18 PIANO	A18 PIANO
A19 PIANO	A19 PIANO
A20 PIANO	A20 PIANO
A21 PIANO	A21 PIANO
A22 PIANO	A22 PIANO
A23 PIANO	A23 PIANO
A24 PIANO	A24 PIANO
A25 PIANO	A25 PIANO
A26 PIANO	A26 PIANO
A27 PIANO	A27 PIANO
A28 PIANO	A28 PIANO
A29 PIANO	A29 PIANO
A30 PIANO	A30 PIANO
A31 PIANO	A31 PIANO
A32 PIANO	A32 PIANO
A33 PIANO	A33 PIANO
A34 PIANO	A34 PIANO
A35 PIANO	A35 PIANO
A36 PIANO	A36 PIANO
A37 PIANO	A37 PIANO
A38 PIANO	A38 PIANO
A39 PIANO	A39 PIANO
A40 PIANO	A40 PIANO

4. Preset Tones

DUO Tone List

These tones are separated between the tone that sounds on the left end of the keyboard and the tone that sounds on the right.

Left end tone

Right end tone

Group names	Tone Names (Tone A2=WOOD BASS/ELEC PIANO)
A1 WOOD BASS	A1 WOOD BASS
A2 WOOD BASS	A2 WOOD BASS
A3 WOOD BASS	A3 WOOD BASS
A4 WOOD BASS	A4 WOOD BASS
A5 WOOD BASS	A5 WOOD BASS
A6 WOOD BASS	A6 WOOD BASS
A7 WOOD BASS	A7 WOOD BASS
A8 WOOD BASS	A8 WOOD BASS
A9 WOOD BASS	A9 WOOD BASS
A10 WOOD BASS	A10 WOOD BASS
A11 WOOD BASS	A11 WOOD BASS
A12 WOOD BASS	A12 WOOD BASS
A13 WOOD BASS	A13 WOOD BASS
A14 WOOD BASS	A14 WOOD BASS
A15 WOOD BASS	A15 WOOD BASS
A16 WOOD BASS	A16 WOOD BASS
A17 WOOD BASS	A17 WOOD BASS
A18 WOOD BASS	A18 WOOD BASS
A19 WOOD BASS	A19 WOOD BASS
A20 WOOD BASS	A20 WOOD BASS
A21 WOOD BASS	A21 WOOD BASS
A22 WOOD BASS	A22 WOOD BASS
A23 WOOD BASS	A23 WOOD BASS
A24 WOOD BASS	A24 WOOD BASS
A25 WOOD BASS	A25 WOOD BASS
A26 WOOD BASS	A26 WOOD BASS
A27 WOOD BASS	A27 WOOD BASS
A28 WOOD BASS	A28 WOOD BASS
A29 WOOD BASS	A29 WOOD BASS
A30 WOOD BASS	A30 WOOD BASS
A31 WOOD BASS	A31 WOOD BASS
A32 WOOD BASS	A32 WOOD BASS
A33 WOOD BASS	A33 WOOD BASS
A34 WOOD BASS	A34 WOOD BASS
A35 WOOD BASS	A35 WOOD BASS
A36 WOOD BASS	A36 WOOD BASS
A37 WOOD BASS	A37 WOOD BASS
A38 WOOD BASS	A38 WOOD BASS
A39 WOOD BASS	A39 WOOD BASS
A40 WOOD BASS	A40 WOOD BASS

Note the bottom two rows (VARIOUS 1 and VARIOUS 2) of the DUO Tone List. Each of the items in these rows shows both the left side and right side tones (H3 = HARP/FLUTE).

ENSEMBLE Tone List

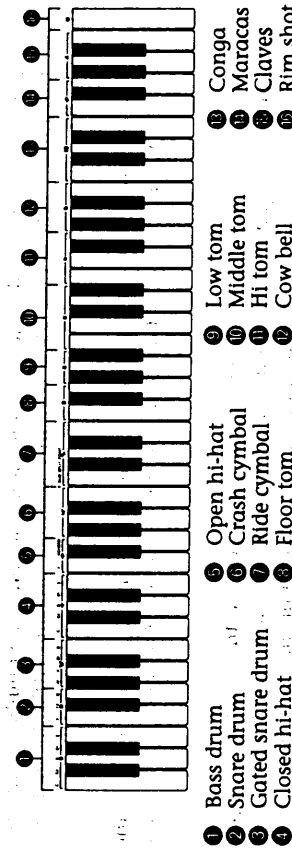
As with the SOLO tone list, these tones are classified according to groups, from A through H.

Tone Names (Tone A2=ENSEMBLE 1)

Group names	Tone Names (Tone A2=ENSEMBLE 1)
A1 ENSEMBLE	A1 ENSEMBLE
A2 ENSEMBLE	A2 ENSEMBLE
A3 ENSEMBLE	A3 ENSEMBLE
A4 ENSEMBLE	A4 ENSEMBLE
A5 ENSEMBLE	A5 ENSEMBLE
A6 ENSEMBLE	A6 ENSEMBLE
A7 ENSEMBLE	A7 ENSEMBLE
A8 ENSEMBLE	A8 ENSEMBLE
A9 ENSEMBLE	A9 ENSEMBLE
A10 ENSEMBLE	A10 ENSEMBLE
A11 ENSEMBLE	A11 ENSEMBLE
A12 ENSEMBLE	A12 ENSEMBLE
A13 ENSEMBLE	A13 ENSEMBLE
A14 ENSEMBLE	A14 ENSEMBLE
A15 ENSEMBLE	A15 ENSEMBLE
A16 ENSEMBLE	A16 ENSEMBLE
A17 ENSEMBLE	A17 ENSEMBLE
A18 ENSEMBLE	A18 ENSEMBLE
A19 ENSEMBLE	A19 ENSEMBLE
A20 ENSEMBLE	A20 ENSEMBLE
A21 ENSEMBLE	A21 ENSEMBLE
A22 ENSEMBLE	A22 ENSEMBLE
A23 ENSEMBLE	A23 ENSEMBLE
A24 ENSEMBLE	A24 ENSEMBLE
A25 ENSEMBLE	A25 ENSEMBLE
A26 ENSEMBLE	A26 ENSEMBLE
A27 ENSEMBLE	A27 ENSEMBLE
A28 ENSEMBLE	A28 ENSEMBLE
A29 ENSEMBLE	A29 ENSEMBLE
A30 ENSEMBLE	A30 ENSEMBLE
A31 ENSEMBLE	A31 ENSEMBLE
A32 ENSEMBLE	A32 ENSEMBLE
A33 ENSEMBLE	A33 ENSEMBLE
A34 ENSEMBLE	A34 ENSEMBLE
A35 ENSEMBLE	A35 ENSEMBLE
A36 ENSEMBLE	A36 ENSEMBLE
A37 ENSEMBLE	A37 ENSEMBLE
A38 ENSEMBLE	A38 ENSEMBLE
A39 ENSEMBLE	A39 ENSEMBLE
A40 ENSEMBLE	A40 ENSEMBLE

About DRUM SET tone (H5)

The DRUM SET (H5) assigns 16 percussion sounds to the keyboard as illustrated below. The sounds assigned to each key are indicated above the keyboard.



To select a preset tone

1. Press either the SOLO, DUO, or ENSEMBLE button to select the tone type. The indicator above the button you press should light.
2. Press the BANK button (A through H) for the tone you want to select.
3. Press the NUMBER button (1 through 5) for the tone you want to select.

Example:

To select the ENSEMBLE tone HARP STRINGS, which is tone number B5.

1. Press the ENSEMBLE button and the indicator above the button lights.	
2. Press the BANK B button.	
3. Press the NUMBER 5 button. Now if you play the keyboard you will hear the HARP STRINGS tone.	

Notes

- The last tone selections you make from the SOLO, DUO, and ENSEMBLE lists are retained when you switch over to another list. That means the last tone you selected will still be selected when you return to that list again.
- Whenever you switch power off, your tone selections are cleared. Switching power on automatically selects tone A1 (PIANO) of the SOLO list. When you enter another list after switching power on, the corresponding A1 tone is selected automatically.
- If you press a NUMBER button only, the tone will change to that tone number within the same bank. This means that if tone B5 is currently selected, pressing NUMBER button 3 switches to tone B3.
- If you press a BANK button only, the tone will change to the same tone number within the bank you selected. This means that if tone B5 is currently selected, pressing BANK button F switches to tone F5.
- This keyboard is capable of producing a maximum of 16 notes at the same time. Some tones can produce only eight notes simultaneously, and some of the ENSEMBLE tones can produce only 4 notes. The number of notes that can be played at the same time is also reduced when rhythm is being played, when you are using Auto-Accompaniment, etc.

5.Auto Rhythms

The Beat List printed on the panel of the keyboard shows you the BANK and NUMBER inputs required to select from among the 40 built-in auto-rhythm patterns.

Beat List

Auto-rhythms are classified according to groups, from A through H.

Group names Auto-Rhythm Names (Beat A3=DISCO)

BEAT			
A1 DISCO	A11 BEAT 1	A2 BEAT 1	A3 BEAT 1
B1 ROCK	B11 BEAT 1	B2 BEAT 1	B3 BEAT 1
C1 ROCK	C11 BEAT 1	C2 BEAT 1	C3 BEAT 1
D1 ROCK	D11 BEAT 1	D2 BEAT 1	D3 BEAT 1
E1 ROCK	E11 BEAT 1	E2 BEAT 1	E3 BEAT 1
F1 ROCK	F11 BEAT 1	F2 BEAT 1	F3 BEAT 1
G1 ROCK	G11 BEAT 1	G2 BEAT 1	G3 BEAT 1
H1 ROCK	H11 BEAT 1	H2 BEAT 1	H3 BEAT 1
I1 ROCK	I11 BEAT 1	I2 BEAT 1	I3 BEAT 1
J1 ROCK	J11 BEAT 1	J2 BEAT 1	J3 BEAT 1
K1 ROCK	K11 BEAT 1	K2 BEAT 1	K3 BEAT 1
L1 ROCK	L11 BEAT 1	L2 BEAT 1	L3 BEAT 1
M1 ROCK	M11 BEAT 1	M2 BEAT 1	M3 BEAT 1
N1 ROCK	N11 BEAT 1	N2 BEAT 1	N3 BEAT 1
O1 ROCK	O11 BEAT 1	O2 BEAT 1	O3 BEAT 1
P1 ROCK	P11 BEAT 1	P2 BEAT 1	P3 BEAT 1
Q1 ROCK	Q11 BEAT 1	Q2 BEAT 1	Q3 BEAT 1
R1 ROCK	R11 BEAT 1	R2 BEAT 1	R3 BEAT 1
S1 ROCK	S11 BEAT 1	S2 BEAT 1	S3 BEAT 1
T1 ROCK	T11 BEAT 1	T2 BEAT 1	T3 BEAT 1
U1 ROCK	U11 BEAT 1	U2 BEAT 1	U3 BEAT 1
V1 ROCK	V11 BEAT 1	V2 BEAT 1	V3 BEAT 1
W1 ROCK	W11 BEAT 1	W2 BEAT 1	W3 BEAT 1
X1 ROCK	X11 BEAT 1	X2 BEAT 1	X3 BEAT 1
Y1 ROCK	Y11 BEAT 1	Y2 BEAT 1	Y3 BEAT 1
Z1 ROCK	Z11 BEAT 1	Z2 BEAT 1	Z3 BEAT 1

To select an auto-rhythm

1. Press the BEAT button. The indicator above the button should light.
2. Press the BANK button (A through H) for the auto-rhythm you want to select.
3. Press the NUMBER button (1 through 5) for the auto-rhythm you want to select.

Example: To select SALSA, which is auto-rhythm F3.

1. Press the BEAT button and the indicator above it lights.	
2. Press the BANK F button.	
3. Press the NUMBER 3 button. Now if you press the START/STOP button, you will hear the SALSA rhythm.	

Notes

- The last auto-rhythm selection you make is retained until you switch power off. Switching power on automatically selects auto-rhythm A1 (16 BEAT 1).
- If you press a NUMBER button only, the auto-rhythm will change to that tone number within the same bank. This means that if auto-rhythm B5 is currently selected, pressing NUMBER button 3 switches to auto-rhythm B3.
- If you press a BANK button only, the auto-rhythm will change to the same auto-rhythm number within the bank you selected. This means that if auto-rhythm B5 is currently selected, pressing BANK button F switches to auto-rhythm F5.

To play an auto-rhythm

1. After selecting an auto-rhythm, press START/STOP button to start the rhythm.	
2. Adjust the tempo using the TEMPO control buttons. Each press of ▲ speeds up the tempo, while pressing ▼ slows it down. • Tempo of the auto-rhythm can be adjusted between 40 and 256 beats per minute. • Pressing both TEMPO control buttons at the same time sets the tempo to 132 beats per minute.	
3. You can adjust the volume of the rhythm by using the ACCOMP VOLUME slider.	
4. Press the START/STOP button again to stop auto-rhythm play.	

- You can add some variation to the auto-rhythm play by pressing the INTRO/ENDING and SYNCHRO/FILL-IN buttons. See pages 20 through 24 of this manual for details.

6. Jukebox

The keyboard is programmed to play 40 different tunes, each of which demonstrates the capabilities of one of the auto-rhythms. Select the tune you want to play from the Jukebox List printed on the keyboard's console.

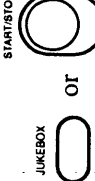
To play a Jukebox tune

1. Press the JUKEBOX button, and Jukebox tune begins to play.
2. To stop Jukebox playback, press the JUKEBOX button again.

Note that each of the auto-rhythms is related to a Jukebox tune. This means that whenever you press the JUKEBOX button, the Jukebox tune that corresponds to the currently selected auto-rhythm begins to play.

To select a Jukebox tune

Example: To play Ob-La-Di Ob-La-Da, which is Jukebox tune B2 and also corresponds to Beat List B2.

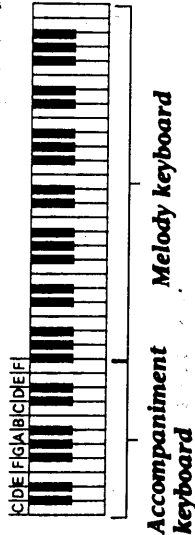
1. Press the BEAT button and the indicator above it lights.	
2. Press the BANK B button.	
3. Press the NUMBER 2 button.	
4. Press the JUKEBOX button to start play of the corresponding Jukebox tune. Play repeats until you switch the Jukebox function off.	
5. To switch the Jukebox function off, press the JUKEBOX button or the START/STOP button.	

7. Auto-accompaniment

This unit features 40 accompaniment patterns that let you add full accompaniments to your performances automatically. You can select from two types of auto-accompaniment simplified fingering chord play (CASIO CHORD ON) or standard fingering (FINGERED).

Accompaniment keyboard

When you set the POWER/CHORD selector to FINGERED or CASIO CHORD ON, the keys of the lower 1.5 octave of the keyboard are the accompaniment keys and the rest of the keyboard is the melody section.



Playing an accompaniment using CASIO CHORD

The Casio Chord system lets you easily play the four main types of chords. Playing of the chords is simplified as shown in the chart below.

Keys	Chord Type	Example
Pressing one accompaniment key	Major chord	C (C Major Chord)
Pressing two accompaniment keys	Minor chord	Cm (C Minor Chord)
Pressing three accompaniment keys	Seventh chord	C7 (C Seventh Chord)
Pressing four accompaniment keys	Minor seventh chord	Cm7 (C Minor Seventh Chord)

7. Auto-accompaniment

Note

The bottom note that you play determines the name of the chord. For example, if the bottom note is C, the keyboard plays a C chord.

Follow these steps to play the Casio Chord auto-accompaniment.

1. Set the POWER/CHORD selector to the CASIO CHORD ON position.	
2. Select one of the auto-rhythms. (refer to "Auto-rhythms" on page 13)	
3. Start the auto-rhythm by pressing the START/STOP button.	
4. Press one to four accompaniment keys. The accompaniment automatically plays.	
5. Adjust TEMPO [▲▼], MAIN VOLUME slider, and ACCOMP VOLUME slider.	
6. Press the START/STOP button to stop the auto-accompaniment.	

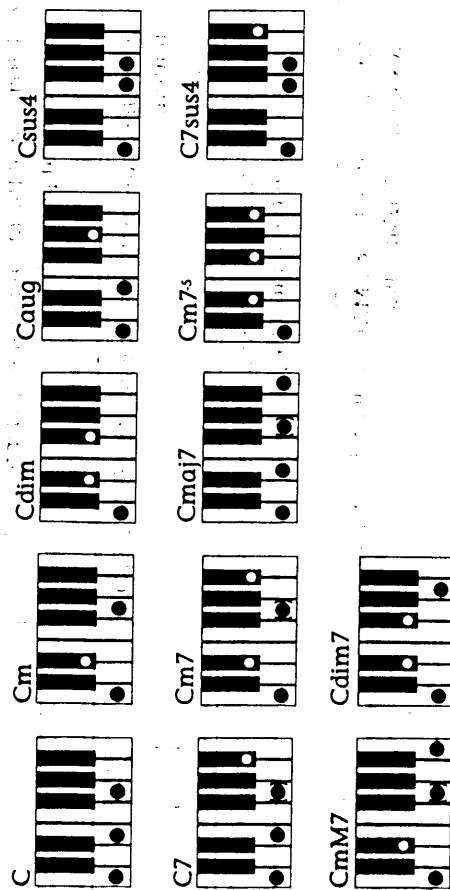
Note

You can also use introductions, fill-ins and ending patterns in your accompaniment performance. See page 20 for details.

Playing an accompaniment using standard fingering

The standard fingering (FINGERED) mode lets you play a wider variety of chords. You can start an accompaniment pattern by pressing down either three or four of the proper accompaniment keys.

This unit is capable of recognizing 12 different chords. The following shows the fingerings of the recognized chords with a root of C. Note that the fingerings within parentheses can be omitted without changing the sound of the chord produced.



Notes

Each of the above examples shows only one of the possible fingerings for each chord. Note that you can play a chord by pressing its notes in any combination. For example, each of the following fingerings produce the same C chord.



- See the "List of fingered chord" on page 56 to 58 for information on the fingering of chords with all the roots.

Follow these steps to play the standard fingering auto-accompaniment.

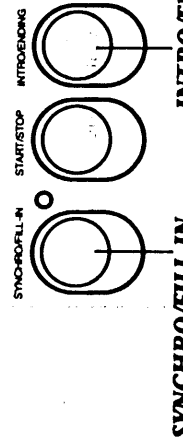
1. Set the POWER/CHORD selector to the FINGERED position.	
2. Select one of the auto-rhythms. (refer to "Auto-rhythms" on page 13)	
3. Start the auto-rhythm by pressing the START/STOP button.	
4. Press the accompaniment keys for the desired chord.	
5. Adjust TEMPO [▲/▼], MAIN VOLUME slider, and ACCOMP VOLUME slider.	
6. Press the START/STOP button to stop the auto-accompaniment.	

Note

You can also use introductions, fill-ins and ending patterns in your accompaniment performance. See page 20 for details.

Using INTRO/ENDING button and SYNCHRO/FILL-IN button

These 2 buttons give you control over the rhythm and accompaniment patterns. When the POWER/CHORD selector is in the FINGERED or CASIO CHORD ON position, you can control all of the accompaniment patterns. When it is in POWER ON position, you can control the rhythm pattern only.



INTRO/ENDING button

Use this button to perform the two operations described below:

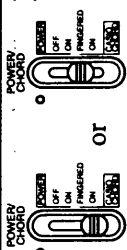
- To start the accompaniment pattern
When you press the INTRO/ENDING button instead of the START/STOP button to start the accompaniment pattern, the keyboard plays a 2-measure intro before going into the standard accompaniment pattern.
- To end the accompaniment pattern
When you press the INTRO/ENDING button instead of the START/STOP button to end the accompaniment pattern, the keyboard plays a 2-measure ending before ending the accompaniment pattern.

SYNCHRO/FILL-IN button

You can use this button to perform the two operations described as follows.

- To insert a fill in pattern
When you press the SYNCHRO/FILL-IN button while Auto-Accompaniment is playing, an appropriate fill-in is inserted into the rhythm pattern. If you hold the button down, the fill-in pattern is repeated until the end of the measure during which you release the button.

To synchronize the start the accompaniment pattern with your play of the keyboard, as described in the following procedure.

1. Set the POWER/CHORD selector to the CASIO CHORD ON or FINGERED position.	
2. Select an auto-rhythm (page 13).	
3. Press the SYNCHRO/FILL-IN button. The indicator above the button should light. • At this time, you could press the INTRO/ENDING button (page 20). If you do, the keyboard will play a 2-measure intro pattern before going into the auto-accompaniment pattern.	
4. When you are ready, press the accompaniment keys to play the first chord. As soon as you do, the auto-accompaniment pattern begins to play.	
5. To stop the auto-accompaniment pattern play, press the START/STOP button.	

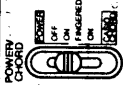
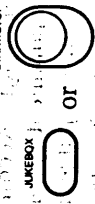
About "Expert Logic Accompaniment"

The Auto-Accompaniment system of this keyboard employs a revolutionary new system that is unlike anything ever before available on an electronic keyboard. Expert Logic Accompaniment is a totally revolutionary new intelligent accompaniment system that makes real-time decisions about chord progressions. Based on key judgement logic, this system automatically selects and plays the appropriate accompaniment pattern to match the key of the chord progression being played. This means it plays different patterns for the same major chord, depending on whether the chord is being used as a tonic or subdominant. The result is sophisticated accompaniment patterns that are musically logical all the time.

8. Using Ad-Lib Musician

The Ad-Lib Musician function let's you easily ad-lib along with the Auto-Accompaniment patterns and Jukebox tunes. It adjusts the scale of the keyboard to play only the notes that match the chord being played by the accompaniment. This means you can press any key and stay within the correct scale for instant ad-libs.

To ad-lib with a Jukebox tune

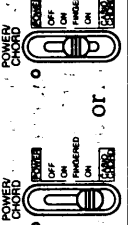
1. Slide the POWER/CHORD selector to the POWER ON position.	
2. Select a Jukebox tune and press the JUKEBOX button to play it (page 15).	
3. Press the AD-LIB MUSICIAN button. The indicator above the button should light. - At this point, the melody part of the Jukebox tune no longer sounds, and the scale of the keyboard changes to match the type and chords of the current Beat List setting. Now you can play any key on the keyboard you want. Note that since the keyboard is now an "Ad-Lib Musician" keyboard, you will not be able to play it like a standard keyboard. - Anytime you want to cancel the Ad-Lib Musician function and restart playback of the Jukebox tune's melody (and return the keyboard to its normal function), simply press the AD-LIB MUSICIAN button again (so that the indicator goes out).	
4. To stop playback of the jukebox tune, press the START/STOP button or the JUKEBOX button.	

Note

- You can change the tone and tempo of Jukebox tunes only when you are using them with the Ad-Lib Musician function.

8. Using Ad-Lib Musician

To ad-lib with chord accompaniment

1. Slide the POWER/CHORD selector to the CASIO CHORD ON or FINGERED position.	
2. Press the AD-LIB MUSICIAN button. The indicator above the button should light.	
3. Select a rhythm (page 13).	
4. Press the SYNCHRO/FILL-IN button.	
5. Play a chord on the accompaniment keyboard, and Auto-Accompaniment begins to play. - At this point, the scale of the keyboard changes to match the Auto-Accompaniment. Now you can play any key on the keyboard you want. - Note that since the keyboard is now an "Ad-Lib Musician" keyboard, you will not be able to play it like a standard keyboard.	
6. To stop the Auto-Accompaniment, press the START/STOP button.	
7. Press the AD-LIB MUSICIAN button and the indicator above it will go out.	

Notes

- While you are using the Ad-Lib Musician function, the accompaniment keyboard can be used for play of chords only. You can play additional chords on the melody keyboard only.
- You can record a chord progression into the Chord Memory (page 24) and then play it back for play along with Ad-Lib Musician. During playback from the Chord Memory, you can use the entire keyboard (Accompaniment and Melody keyboards) for ad-lib play.

9. Using the Chord Memory

The Chord Memory makes it possible to store up to 128 chords of an accompaniment pattern into memory. You can then play along with your own accompaniment as you play it back.

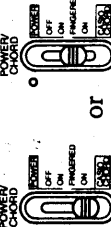
Chord Memory contents

The Chord Memory records the accompaniment chord progression, in addition to Auto-Accompaniment (page 16) START/STOP, INTRO, FILL-IN and ENDING patterns.

Important!

The Chord Memory does not have a back-up power supply. This means that whenever you switch keyboard power off or whenever the Auto Power Off function operates, Chord Memory contents are either deleted entirely or corrupted (and cannot be played back). You have to reinput data into the Chord Memory whenever you switch power off and then on again.

To record into Chord Memory

1. Slide the POWER/CHORD selector to the CASIO CHORD ON or FINGERED position.	
2. Select a rhythm (page 13). • The rhythm setting is not stored in memory. When you playback from the Chord Memory, the currently selected rhythm is applied.	
3. Press the START/STOP button. • Once the rhythm starts to sound, adjust it using the TEMPO buttons. • After you adjust the tempo, press the START/STOP button again to stop the rhythm. • The tempo setting is not stored in memory. When you playback from the Chord Memory, the current tempo is applied.	
4. Press the RECORD button. • A metronome sounds and the tempo indicator flashes to indicate the tempo. • The metronome sound continues until you start to play. • Nothing is recorded into Chord Memory until you play something on the keyboard.	

9. Using the Chord Memory

5. Press the INTRO/ENDING button for an intro pattern. • You can skip this step if you do not want to include an intro.	
6. Play a chord to start recording along with play of the Auto-Accompaniment. • Play the chord by either fingering it or using the Casio Chord function, in accordance with your setting in step 1, above.	
7. After you play your last chord, press the INTRO/ENDING button to insert an ending pattern and end the Auto-Accompaniment. Ending with an ending pattern will cause playback to stop automatically when the ending pattern is reached. • If you do not want to include an ending, press the START/STOP button instead. Ending with a START/STOP operation will cause playback of the Chord Memory contents to repeat until you stop it.	

To play back from Chord Memory

- Slide the POWER/CHORD selector to the CASIO CHORD ON or FINGERED position.
- Set the tempo and select a rhythm for playback.
- Press the PLAY button to start playback of Chord Memory contents.
 - If the Chord Memory contents end with an ending pattern, playback will stop automatically when the end of the data is reached.
 - If the Chord Memory contents do not end with an ending pattern, playback will repeat until you stop it.
- To stop playback at any time, press the START/STOP button.

Note

- During playback from Chord Memory, the entire keyboard becomes a melody keyboard.

10. Troubleshooting

If your keyboard operates erratically, replace the batteries or shift to one of the alternate power sources mentioned in "Choosing a Power Supply" on page 6. If the keyboard continues to operate erratically, use the following troubleshooting chart to correct the problem.

Trouble	Possible Cause	Remedy
No sound, even if keys are pressed.	1. Headphones connected. 2. Auto power off has activated.	1. Disconnect headphones. 2. Set the POWER/CHORD selector to OFF and then ON again.
Not accompaniment and/or rhythm sound.	1. ACCOMP VOLUME slider turned down. 2. ACCOMP VOLUME slider not in correct position.	1. Turn up the ACCOMP VOLUME slider. 2. Make sure ACCOMP VOLUME slider is set at a mark and not between two marks.
Chord Memory contents erased.	1. Power supply cut off. 2. Dead batteries.	1. Make sure power supply is always maintained* (page 6). 2. Replace batteries before they go dead.
Sound cuts off suddenly and unexpectedly during keyboard play, with keyboard set up changing to power on default settings.	Dead batteries.	Replace batteries with new ones.
Occasional interference.	Refrigerators, washing machines and similar electric appliances.	Use outlet as far away as possible from appliance thought to be the cause.
No sound when connected to external amplifier.	Defective connection cord.	Replace connection chord.

- * Chord memory contents are lost and cannot be recovered whenever power is cut off. Restore power and re-record your chords.

11. Care of Your Keyboard

Avoid heat, humidity or direct sunlight.

Do not overexpose the unit to direct sunlight, or place near an air conditioner, or in any extremely hot place.

Take care not to drop the unit and avoid strong impact.

Strong impact may cause malfunctions. When carrying or transporting the unit, protect the keyboard and switches with soft cloth or other material.

Keep the unit free of liquids, dust, etc.

Do not allow foreign matter to get between the keys, especially metallic objects such as hairpins, sewing needles or coins. Also, do not let the unit get wet.

Never attempt to modify any parts of the unit.

The unit is a precision instrument, made of electronic parts. Any modification of, or tampering with inner parts may cause malfunction.

Do not use lacquer, thinner or similar chemicals for cleaning.

Clean the keyboard with a soft cloth dampened in a weak solution of water and a neutral detergent. (Soak the cloth in the solution and squeeze until it is almost dry.)

12. Specifications

Number of keys: 61

Polyphony: 16-note (Max)

Preset tones: 120

Auto-rhythms: 40

Built-in speakers: 12 cm dia. x 2 (output = 1.1W + 1.1W)

Juke Box tunes: 40 tunes

Auto-accompaniment: CASIO CHORD ON, FINGERED

Chord Memory: Real-time recording

Terminals: Memory capacity: up to 128 chords (max)

Power source: Output jack [output impedance: 50Ω, output voltage: 1.4V(RMS)MAX], AC adaptor jack (DC 9V)

3-way AC/DC power sources;

AC: 100, 117, 220 or 240 (± 10V), 50/60 Hz, with optional

AC adaptor AD-5.

DC: 6 D size (SUM-1/R20P) manganese dry batteries.

(Battery life: approx. 6 hours.)

Car battery: Requires optional CA-5 car adaptor

Approximately 6 minutes after the last operation

Auto power off: 6.7W

Power consumption:

Dimensions(W x D x H): 939 x 337 x 110 mm (36 15/16" x 13 1/4" x 4 5/16")

Weight: 4.5kg (9.9 lbs)

Standard accessories: Score stand

- Design and specifications are subject to change without notice.

GUIDELINES LAID DOWN BY FCC RULES

FOR USE OF THE UNIT IN THE U.S.A.

(not applicable to other areas).

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate the equipment with respect to the receiver
- move the equipment away from the receiver
- plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.